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EXAMINER

ESM1/0712

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ART UNIT PAPER NUMBER

9

2501

DATE MAILED:

07/12/94

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

This application has been examined Responsive to communication filed on May 25, 1994 This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|--|--|
| <input type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | <input type="checkbox"/> Notice of Informal Patent Application, PTO-152. |
| <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. Claims 1-35 are pending in the application.

Of the above, claims _____ are withdrawn from consideration.

2. Claims _____ have been cancelled.

3. Claims 1-6 are allowed.

4. Claims 7, 8, 16, 19-21, 26 and 30 are rejected.

5. Claims 9-15, 17, 18, 22-25, 27-29, 31-35 are objected to.

6. Claims _____ are subject to restriction or election requirement.

7. This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. Formal drawings are required in response to this Office action.

9. The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are acceptable; not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been approved by the examiner; disapproved by the examiner (see explanation).

11. The proposed drawing correction, filed _____, has been approved; disapproved (see explanation).

12. Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has been received not been received been filed in parent application, serial no. _____; filed on _____.

13. Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. Other

EXAMINER'S ACTION

Art Unit 2501

Applicant's response filed on May 25, 1994 has been considered. The claim 31 is amended. The rejection under 35 U.S.C. 112 are withdrawn. In view of a further search, a new rejection is being applied as set forth further below. this action is not made final.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 7, 8, 19, 26 and 30 are rejected under 35 U.S.C. § 102(e) as being anticipated by Payne et al.

Payne et al discloses in Fig. 1a an optical fiber tip for use in a laser delivery system comprising a waveguide (3) having a tip (1) for communicating electromagnetic radiation of the laser beam L₁ in a propagation direction to the tip of the waveguide (3);

- a reflecting surface having a bevelled surface on the tip of the waveguide and having a reflective coating is deposited on the flat elliptical surface; a transmitting surface on the tip of the waveguide having a particular area within which radiation propagating in the lateral direction is incident at below a

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critical angle; and the reflecting surface and the particular area having first and second widths and the second width is essentially equal to or greater than the first width.

The limitation in claim 8 wherein the reflecting surface comprises a bevelled surface at a distal end of the tip is disclosed in Payne et al.

The limitation in claim 19, wherein the waveguide comprises an optical fiber is disclosed in Payne et al.

The limitations in claim 26 are similar with the limitations in claim 7, therefore, are also disclosed in Payne et al.

The limitation in claim 30 is similar the limitation in claim 8 and also disclosed in Payne et al.

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

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Claims 16, 20 and 21 are rejected under 35 U.S.C. § 103 as being unpatentable over Payne et al.

Payne et al does not disclose a transparent cap secured to the waveguide, this limitation obvious disclosed in Payne et al, because the optical fiber tip for use in a laser delivery system, need the cap to protect the waveguide.

The limitation in claim 20 wherein the bevelled surface is disposed at an angle of about 45°; and the fiber has a refractive index of about 1.62, it is obvious design choice.

The limitation in claim 21, is also disclosed in Payne et al, because the reflective coating is piece of material coupled to the end of the waveguide.

Claims 9-15, 17, 18, 22-25, 27-29 and 31-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The limitations in above claims are not disclosed in Payne et al.

Claims 1-6 are allowable over the prior art of record.

Any inquiry concerning this communication should be directed to Phan T. Heartney at telephone number (703) 308-4848.

Heartney/EW
July 08, 1994

POH

John D. Lee
JOHN D. LEE
PRIMARY PATENT EXAMINER
GROUP ART UNIT 251